

(No Model.)

J. T. COLEMAN.

PUMP.

No. 251,413.

Patented Dec. 27, 1881.

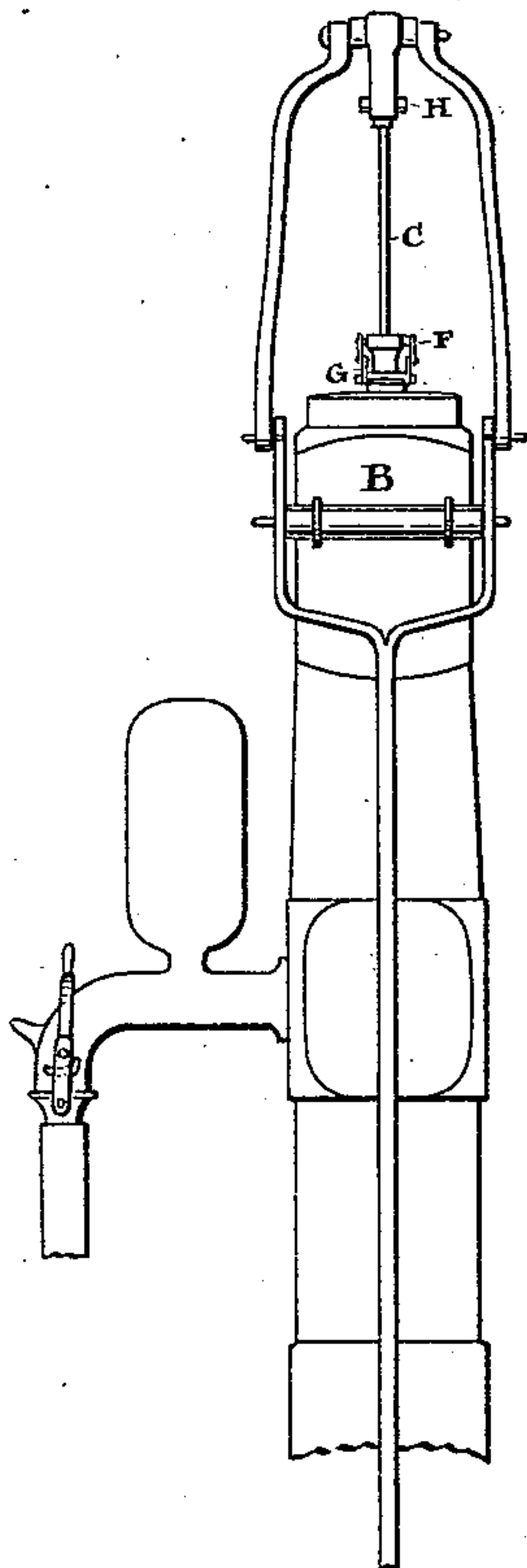


Fig. 1.

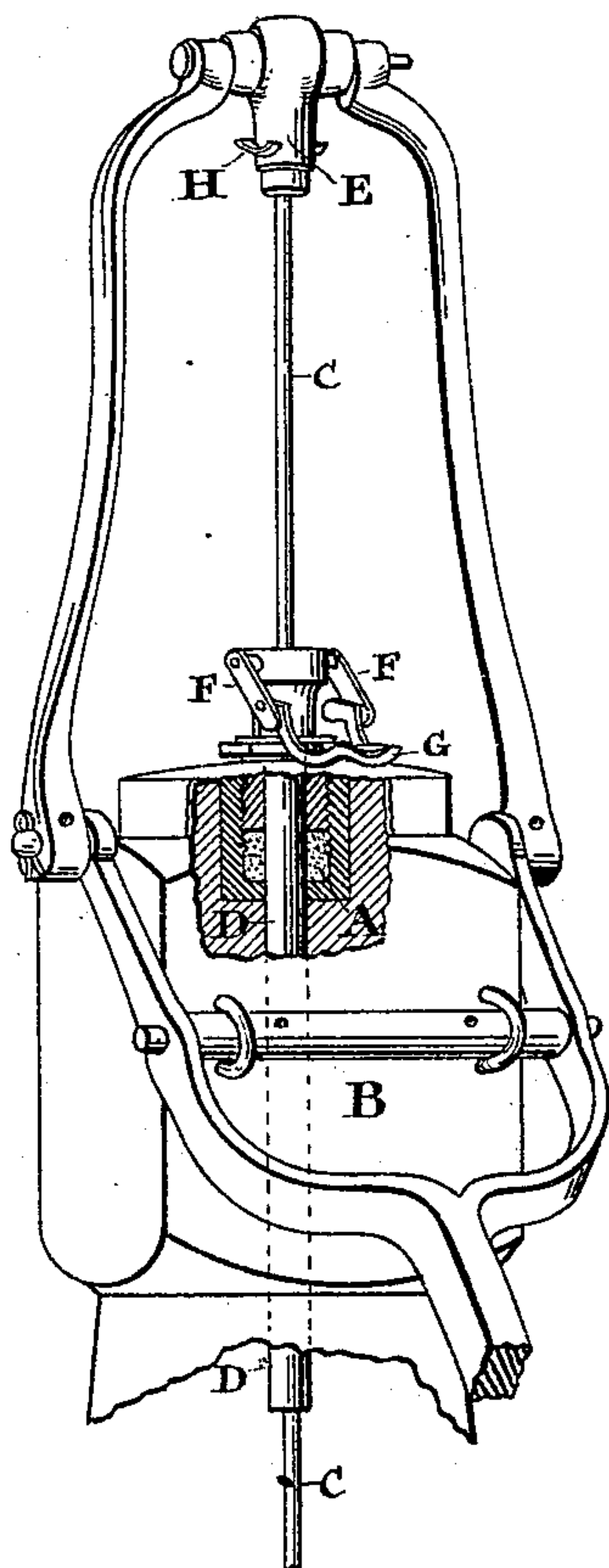


Fig. 2.

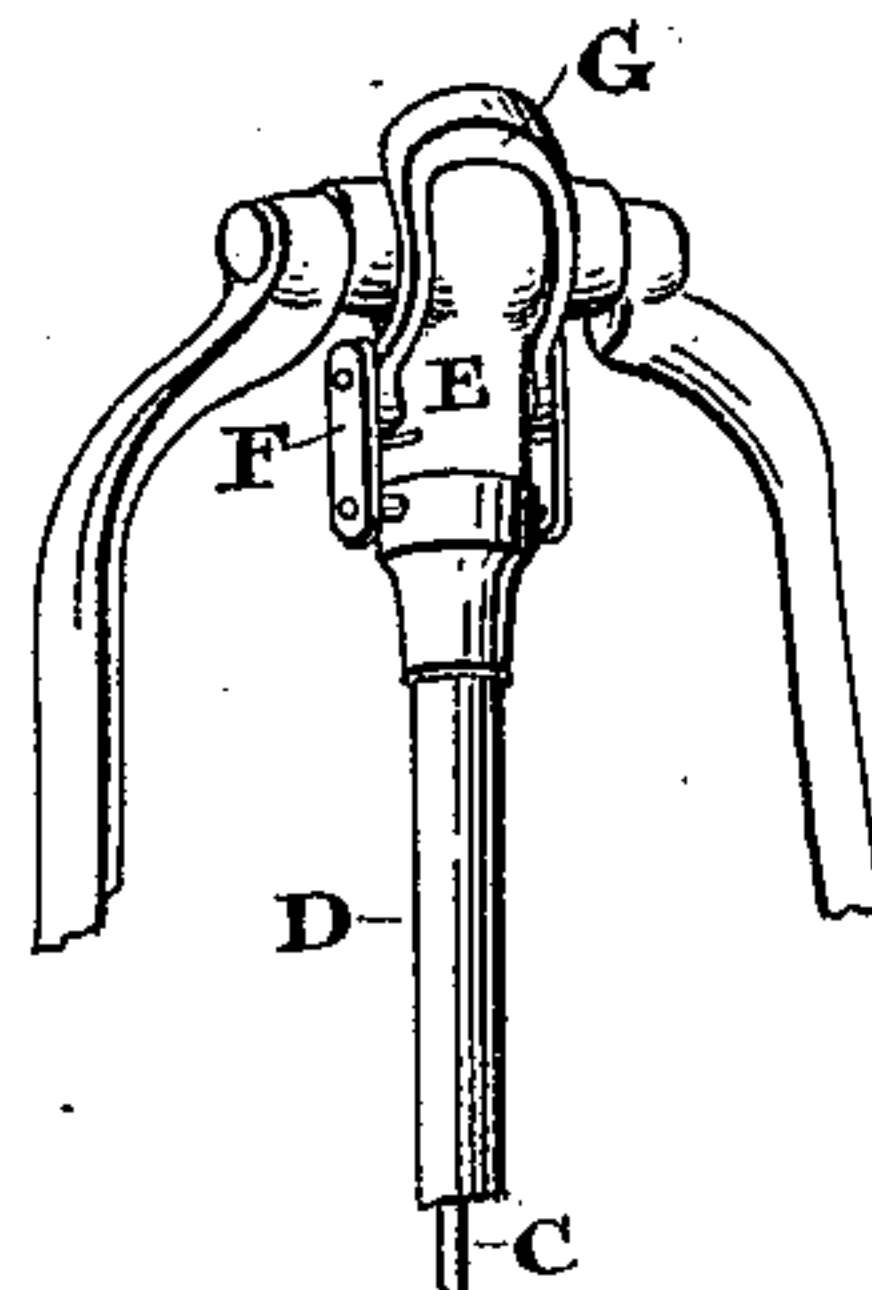


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

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## PUMP.

SPECIFICATION forming part of Letters Patent No. 251,413, dated December 27, 1881.

Application filed May 18, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN THOMAS COLEMAN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have  
5 invented certain new and useful Improvements in Pumps, of which the following is a specification.

The object of the invention is to provide an attachment by which the pump may be altered  
10 instantaneously from a common lifting-pump to an effective force-pump, or vice versa; and it consists in passing the pump-rod through a loosely-fitting sleeve held with a stuffing-box arranged in the head of the pump, the sleeve be-  
15 ing provided with a hinged coupling, by which it can be readily attached to the pump-rod when it is desired to use the pump for forcing.

In the drawings, Figure 1 represents an elevation of my new superior pump. Fig. 2 is  
20 an enlarged detail, showing the location of the sleeve when the pump is used as a lifting-pump. Fig. 3 is an enlarged detail, showing the position of the sleeve when the pump is to be used for forcing.

25 Although my invention is applicable to all classes of pumps it has been specially designed for wooden pumps, the manufacture of which I am engaged in, and which class of pumps are constantly required to be force-pumps, although generally used as lifting-pumps. When  
30 made as a force-pump they have hitherto been unnecessarily hard to work when they are required only to lift water. The constant wear of the packing is also objectionable, as it soon becomes worn out, and in winter, when thus  
35 worn, will easily freeze and make the pump for the time useless.

With the view of obviating these defects and at the same time to have an effective force-  
40 pump, I provide the ordinary stuffing-box, A, in the head of the pump B; but instead of fitting the pump-rod C through the tightly-fitting packing within the stuffing-box A, I provide a long sleeve or pipe, D, which is fitted  
45 into the stuffing-box so that no water can escape around its circumference. Through this sleeve D the pump-rod C is carried, being made a loose fit therein, so that it will work easily within it without friction. On the upper end  
50 of the pump-rod C a cap, E, is attached and is made to fit tightly on the end of the sleeve or pipe D when the two are brought together.

Hinged to the upper end of the sleeve D will be noticed two arms, F, connected together by the coupling G, which is eccentrically pivoted  
55 to the arms F, as shown. The ends of the coupling G thus pivoted to the arms F are rounded off to fit into the curved lips H, cast or otherwise formed upon the cap E.

When it is desired to make the pump a force-  
60 pump the cap E is forced into the end of the sleeve or pipe D, and the rounded ends of the coupling G fitted into the curved lips H, and by throwing the coupling G upward, as shown in Fig. 3, the sleeve D is tightly locked to the  
65 pump-rod and the end of the sleeve hermetically sealed by the cap E. In this manner the sleeve or pipe D is made to form a part of the pump-rod C, and as it is packed within the stuffing-box A the pump is a force-pump so  
70 long as it is worked with the sleeve D and rod C coupled as described.

In order to make the pump an ordinary lifting-pump it is merely necessary to throw down the  
75 coupling G, disconnecting it from the curved lips H, when the coupling G will assume the position it is shown in in Fig. 2, and the sleeve D remains stationary, while the pump-rod works freely through it and performs its work of lifting the water.  
80

What I claim as my invention is—

1. In a pump having a stuffing-box within its head, a sleeve passing through and fitting within the said stuffing-box, in combination with the pump-rod passing freely through the  
85 sleeve and provided with a cap arranged to hermetically seal the end of the sleeve when the two are held together by an adjustable coupling, substantially as and for the purpose specified.  
90

2. In a pump in which the pump-rod passes freely through a sleeve fitted within a stuffing-box, the arms F, hinged to the end of the sleeve D and connected together by the pivoted coupling G, having rounded ends, as specified, in  
95 combination with a cap, E, having curved lips H to receive the rounded ends of the coupling G when used to connect the sleeve and pump-rod, substantially as and for the purpose specified.

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Witnesses:

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